

Objectives

- Make copper slip
- Create a simple bezel
- Work harden fired copper clay



Classy Copper

Make a stunning hair ornament with metal clay

Materials

COPPRclay by Metal Adventures

Teflon sheet

Nonstick spray

Roller

Paintbrush

Craft knife or other pointed tool

Stainless steel firing pan with lid

Coconut-shell-based activated carbon

3 or 4 small kiln shelf posts

Agate burnisher

Tumbler with varied shot

Decorative accent for the bezel setting (glass, stone, resin, etc.)

Miscellaneous

Small bowl

Distilled water

Very fine sandpaper

Playing card

Dish soap

By Catherine Randolph Hamilton

The warmth of copper and its lower price point make it an ideal material for larger projects which need not be made in precious metals. When first removed from the kiln, fired copper is soft and easy to manipulate. Work-hardening the metal increases its strength and makes it suitable for more utilitarian projects, such as this hair pin.

Step 1: Lightly coat the Teflon sheet, the roller, and your fingers with nonstick spray. Pinch off a chunk of copper clay and roll it into a narrow coil. Lightly flatten the surface of the coil with the roller. The resulting strip of clay should be between 1/16 and 1/8 inch thick.

Step 2: Gently twist the top end of the strip 90 degrees so the edge faces up, and then bend it into a loose figure eight as shown in the photos. Pinch off any excess clay from the tail and loop the tail down so it points towards the main body of the hair pin.

Step 3: Roll and lightly flatten a second piece of copper clay to form a small strip. Gently curve it back and forth as shown and position it along the lower right edge of the figure eight and top loop.

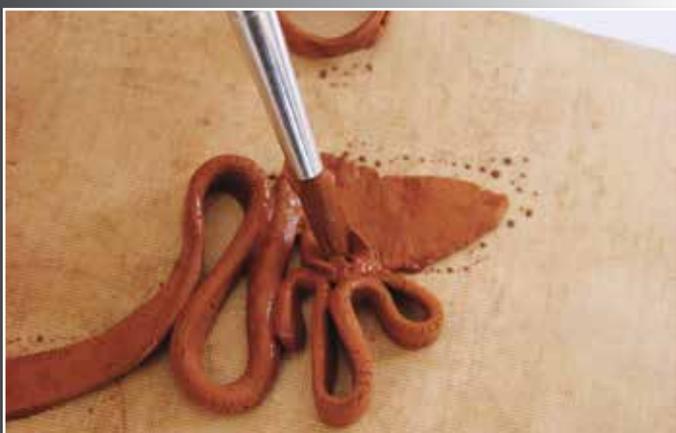
Step 4: Roll and lightly flatten a third piece of copper clay. This strip will be used to form the bezel. It may be 1/16 inch or thinner, depending on what you have chosen to place within it after firing. Bring the two ends of the strip together so they overlap, and press them to close the loop. Set aside.

Step 5: Slightly raise the top loop of the original long strip and slide the tail of the second strip underneath it. Apply pressure with a finger to flatten and combine the two.

Step 6: Place several scraps of copper clay in a small bowl and add a few drops of distilled water. Allow the clay to soften and stir it into the water with the brush until a smooth paste forms.

Step 7: Check the fit of the clay bezel ring against the flattened area at the top of the hair pin. Paint the flattened area and the edge of the ring with slip, and join the two. Paint layers of slip on all of the





areas where the loops and curves of clay within the design touch. Paint slip down the length of the hair pin to smooth and fill any cracks or crevices. Repeat as needed until the design is smooth.

Step 8: Drag a pointed tool through the clay around the top of the bezel to create feather lines. Hold a playing card on edge and press it into the smoothed clay of the straight part of the hair pin to remove any bulges and to taper and refine the shape. Paint again with slip.

Step 9: Allow the project to dry completely. Using fine-grit sandpaper, carefully sand away imperfections and any dried slip remnants along the edges of the project.

Step 10: Position three or four kiln shelf posts in the bottom of the kiln so they will support the stainless steel firing pan. Embed the hair pin in coconut-shell-based activated carbon in the firing pan, cover with lid, and place the pan on the shelf posts. Fire FULL to 1,800 degrees F, or FAST to cone 07, with a hold time of 3 hours.

Step 11: When the kiln has cooled, there will be black dust on the walls and floor. This is normal, and the dust can be vacuumed up later (be sure to do this before firing the kiln again!). Remove the hair pin and use a pointed tool to loosen any stubborn granules of activated carbon stuck in the loops. Rinse off the copper.

Step 12: At this point the metal will feel very pliable and easy to bend. Place the hair stick on a flat work surface and sand it, front and back, with the fine sandpaper to remove most of the residue from firing. The metal will begin to harden a bit and shine. Once most of the dark scale is off of the piece, use an agate burnisher on both sides of it.

Step 13: After working on the metal with the agate burnisher, the hair pin should be much more resistant to bending and feel much stronger. Place it in a tumbler with varied shot and water with a bit of dish soap. Once the piece comes out of the tumbler and has been rinsed and dried, it should be ready for the finishing touches.

Step 14: Filling the bezel can be completed several ways. You can grind a stone or glass cabochon to fit inside and press the bezel edge around it to hold it in place; you can press polymer clay into it and bake the piece to harden the clay, or you can use glue or resin. I wanted a crystalline look, so I filled the project piece with glass frit.

Advanced Methods

Many hair pins fit through a larger decorative metal embellishment. Creating such a design is easy to accomplish using the same techniques as the stick portion. Make the piece flat. After firing, gently bend it into shape — this will also work harden the piece, as well. The size and curve of the piece will determine how much hair it will hold, so it is possible to create hair pins that function more like barrettes.

Catherine Randolph Hamilton works in a variety of media including fused glass, precious metal clays, and chain maille. Her work has won awards and been featured in various magazines. More of her tutorials and a small selection of her work may be viewed at www.SilverArtGlassJewelry.com. She welcomes your comments and questions at catherine@silverartglassjewelry.com. Follow her on facebook at www.facebook.com/catherine.hamilton.9.

Sources

Metal Adventures: www.riogrande.com

